

## I CLAIM:

1. A parachute canopy release mechanism having a  
2 frame supporting a latch which latch interlocks with a  
3 strap holding member which is released by movement of  
4 the latch and the latch being moved by the movement of  
5 an actuating lever and the actuating lever being  
6 protectively covered by a movable cover and exposed  
7 when the movable cover is opened and said frame having  
8 a floor and side walls wherein the improvement  
9 comprises:

10 a canopy release locking bar held by one of said  
11 frame and said movable cover, said canopy release  
12 locking bar locks the cover with respect to the frame  
13 when it is in its closed position and permits the cover  
14 to move to an open position when the canopy release  
15 locking bar is in an open position which allows the  
16 cover to move and expose the actuating lever.

2. The canopy release locking mechanism of claim 1  
wherein said canopy release locking bar is held by said  
cover.

1           3.       The canopy release locking mechanism of claim 2  
2       wherein said canopy release locking bar is pivotally  
3       held by said cover and has a frame engaging cam at each  
4       end and said frame supports a cam contacting arm at  
5       each end of said canopy release locking bar.

1           4.       A parachute canopy release mechanism having a  
2       frame supporting a latch, said latch having a latch  
3       tooth which releasably holds a tang tooth of a  
4       parachute-strap-holding tang portion of a parachute  
5       strap holder which may be inserted or released in a  
6       direction parallel to a longitudinal axis of said  
7       frame, said latch being releasably secured in a locked  
8       position by an actuating lever, said actuating lever  
9       being covered by a hinged cover pivotable about an axis  
10      parallel to a transverse axis of said frame and said  
11      parachute canopy release mechanism being released by  
12      opening said hinged cover to expose said actuating  
13      lever and by opening said actuating lever the latch is  
14      released and moves into a position which releases its  
15      hold on said tang tooth and releases said parachute  
16      strap holder wherein the improvement comprises:

17                   a canopy release locking bar held at an outer end  
18                   of said hinged cover, said canopy release locking bar  
19                   having a frame engaging member which locks the frame  
20                   engaging member with respect to said frame when said  
21                   canopy release locking bar is in its locked position  
22                   and when in its locked position prevents the hinged  
23                   cover from opening and said canopy release locking bar  
24                   being movable to an unlocked position wherein said  
25                   frame engaging member releases its lock to said frame  
26                   and permits said hinged cover to open which permits  
27                   said actuating lever to be opened.

5.                 The parachute canopy release mechanism of claim 4  
                      wherein said canopy release locking bar is pivotally  
                      held at said outer end of said hinged cover.

1                 6.                 The parachute canopy release mechanism of claim 5  
2                        wherein said frame engaging member of said canopy  
3                        release locking bar abuts a pin portion of said frame  
4                        extending inwardly from an inner surface portion of  
5                        said frame.

1       7.       The parachute canopy release mechanism of claim 6  
2       wherein said frame has a pair of vertical side plates  
3       extending upwardly from a floor portion and each  
4       vertical side plate having an inwardly directed side  
5       and canopy release locking bar is positioned within  
6       said inwardly directed sides and each of said vertical  
7       side plates supporting a pin portion of said frame.

1       8.       The parachute canopy release mechanism of claim 4  
2       wherein said canopy release locking bar has a knurled  
3       face having a plurality of longitudinal ridges, a  
4       plurality of said ridges having a plurality of notches  
5       formed along said plurality of ridges.

1       9.       A parachute canopy release mechanism having a  
2       frame supporting a latch which latch interlocks with a  
3       strap holding member which is released by movement of  
4       the latch and the latch being moved by the movement of  
5       an actuating lever and the actuating lever being  
6       protectively covered by a movable cover and exposed  
7       when the movable cover is opened and said frame having  
8       a floor and side walls wherein the improvement  
9       comprises:

10                   a water activated release triggering unit  
11                   removably attached to an underside of said floor of  
12                   said frame, said water activated triggering release  
13                   unit having means for triggering the movement of a  
14                   cover cam supported by said frame, said cover cam, when  
15                   moved, opening said movable cover and said water  
16                   activated release triggering unit having means for  
17                   triggering the movement of a lever cam supported by  
18                   said frame thereby causing the tang tooth to be  
19                   released.

1               10.       The canopy release locking mechanism of claim 9  
2                   further including a locking bar which locks the cover  
3                   in a closed position when the locking bar is in a  
4                   closed position and unlocks the cover when in an open  
5                   position and wherein the movement of said cover cam  
6                   moves said locking bar from a closed position to an  
7                   open position.

1               11.       The canopy release locking mechanism of claim 9  
2                   wherein said frame has an opening in the floor thereof  
3                   through which a triggering lever extends and said water

4 activated release triggering unit moves said triggering  
5 lever when exposed to water.